

Listing of Claims

1. (original) A method of monitoring an integrated circuit chip, comprising:
 - (a) receiving at least one digitized sense signal from the integrated circuit chip, whereby the at least one digitized sense signal represents a corresponding process-dependent parameter within the integrated circuit chip; and
 - (b) determining an analog value for the at least one process-dependent circuit parameters from the corresponding at least one digitized signal;
wherein the process-dependent parameter is measured within a process monitor portion of the integrated circuit and the at least one determined analog value is utilized to correct for the process-dependent parameter in an operational portion of the integrated circuit.
2. (original) The method according to claim 1, wherein steps (a) and (b) are performed outside of the integrated circuit chip.
3. (original) The method according to claim 1, wherein step (b) comprises retrieving the at least one value from a look-up table using the at least one digitized signal.
4. (original) The method according to claim 1, wherein step (b) comprises calculating the at least one value from the at least one digitized signal.
5. (original) The method according to claim 1, wherein the at least one digitized sense signal represents a gate-to-source threshold voltage of a transistor fabricated on the integrated circuit chip.
6. (original) The method according to claim 1, wherein the at least one digitized sense signal represents a transconductance parameter of a transistor fabricated on the integrated circuit chip.

7. (original) The method according to claim 1, wherein the at least one digitized sense signal represents a sheet resistance of a resistor fabricated on the integrated circuit chip.

8. (original) The method according to claim 1, wherein the at least one digitized sense signal represents a temperature of the integrated circuit chip.

9. (original) The method according to claim 1, wherein the at least one digitized sense signal represents a power supply voltage on the integrated circuit chip.

10. (original) The method according to claim 1, wherein the at least one digitized sense signal includes a plurality of digitized sense signals that represent a plurality of the following:

a gate-to-source threshold voltage of a transistor fabricated on the integrated circuit chip;

a transconductance parameter of a transistor fabricated on the integrated circuit chip;

a sheet resistance of a resistor fabricated on the integrated circuit chip;

a temperature of the integrated circuit chip; and

a power supply voltage on the integrated circuit chip.

11. (original) A system for monitoring an integrated circuit chip, comprising:

means for receiving at least one digitized sense signal from the integrated circuit chip, whereby the at least one digitized sense signal represents a corresponding process-dependent parameter within the integrated circuit chip; and

means for determining an analog value for the at least one process-dependent circuit parameters from the corresponding at least one digitized signal;

wherein the process-dependent parameter is measured within a process monitor portion of the integrated circuit and the at least one determined analog value is utilized to correct for the process-dependent parameter in an operational portion of the integrated circuit.

12. (original) The system according to claim 11, wherein the means for receiving and the means for determining are positioned external of the integrated circuit chip.
13. (previously presented) The system according to claim 11, wherein the means for determining comprises means for retrieving the at least one value from a look-up table using the at least one digitized signal.
14. (original) The system according to claim 11, wherein the means for determining comprises means for calculating the at least one value from the at least one digitized signal.
15. (original) The system according to claim 11, wherein the at least one digitized sense signal represents a gate-to-source threshold voltage of a transistor fabricated on the integrated circuit chip.
16. (original) The system according to claim 11, wherein the at least one digitized sense signal represents a transconductance parameter of a transistor fabricated on the integrated circuit chip.
17. (original) The system according to claim 11, wherein the at least one digitized sense signal represents a sheet resistance of a resistor fabricated on the integrated circuit chip.
18. (original) The system according to claim 11, wherein the at least one digitized sense signal represents a temperature of the integrated circuit chip.
19. (original) The system according to claim 11, wherein the at least one digitized sense signal represents a power supply voltage on the integrated circuit chip.

20. (original) The system according to claim 11, wherein the at least one digitized sense signal includes a plurality of digitized sense signals that represent a plurality of the following:

- a gate-to-source threshold voltage of a transistor fabricated on the integrated circuit chip;
- a transconductance parameter of a transistor fabricated on the integrated circuit chip;
- a sheet resistance of a resistor fabricated on the integrated circuit chip;
- a temperature of the integrated circuit chip; and
- a power supply voltage on the integrated circuit chip.